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Montana Department of
ENVIRONMENTAL QUALITY

DRAFT ENVIRONMENTAL ASSESSMENT

FOR REISSUANCE OF
A MONTANA HAZARDOUS WASTE PERMIT
(MTHWP-02-02)

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FOR

CENEX HARVEST STATES COOPERATIVES
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DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Montana Hazardous Waste Permit Number: MTHWP-02-02

Issued to: Cenex Harvest States Cooperatives - Laurel Refinery

Legal Description: Sections 15 and 16, Township 2 South, Range 24 East
Yellowstone County, Montana

Issued by: Hazardous Waste Section
Air and Waste Management Bureau
Permitting and Compliance Division

Purpose of the Environmental Assessment (EA)

The Montana Department of Environmental Quality (DEQ) is required under the Montana Environmental Policy Act (MEPA) to conduct an environmental assessment (EA) on the proposed permit action described below. An EA documents all reasonable alternatives to DEQ's permit action and outlines the potential impacts to the human environment resulting from DEQ's permitting action. Reasonable alternatives to the proposed action are also discussed. Based on an impact analysis and professional judgement, DEQ makes a decision on the proposed permit action and summarizes the decision in the EA. If the decision might significantly impact the human environment, a more detailed review in the form of an environmental impact statement must be conducted by DEQ.

Description of Proposal

Summary

DEQ intends to re-issue a hazardous waste permit to Cenex Harvest States Cooperatives (CHS) for the operation of a corrective action management unit (CAMU), closure and post-closure care of a land treatment unit, and facility-wide corrective action. This draft permit (MTHWP-02-02) has been written under the authority of the Montana Hazardous Waste Act (MHWA), Montana Code Annotated, Title 75, Chapter 10, Part 4 and according to the Administrative Rules of

Montana (ARM) Title 17, Chapter 53.

MTHWP-02-02 is a reissuance and combination of two permits: a hazardous waste permit (MTHWP-91-01) issued by DEQ for closure and post-closure care of two land treatment units, and an EPA-issued permit requiring facility-wide corrective action. The two original permits were issued in 1991.

Permit Background

The Resource Conservation and Recovery Act (RCRA) is the federal law which requires proper management and disposal of hazardous waste. Hazardous waste permits are required for on-site units that are used to treat, store or dispose of hazardous waste. Hazardous waste permits must also include provisions requiring facility-wide investigation and remediation of hazardous waste releases. The Montana Hazardous Waste Act (MHWA) is the State equivalent of RCRA.

The State of Montana issued a hazardous waste permit to CHS in 1991 for the closure and post-closure care of the facility's inactive land treatment unit. In addition, because the State of Montana was not yet authorized by EPA to implement facility-wide corrective action, EPA issued a federal permit to CHS that same year. The EPA permit required facility-wide investigation of releases and potential releases of hazardous waste or hazardous constituents to soil or groundwater. On December 26, 2000, the State was approved by EPA to implement facility-wide corrective action. This enables DEQ to combine requirements for closure and post-closure care of the land treatment unit with requirements for facility-wide corrective action in a single permit.

Hazardous waste permits are issued for a period of 10 years. At the end of this period, the permittee may apply for renewal. CHS submitted an application for permit reissuance in August 2000.

CHS's application is complete, meets the requirements of ARM 17.53.1200 et seq., and is protective of human health and the environment. A draft permit has been prepared based on the complete application and is issued under Title 75, Chapter 10, Part 4, of MHWA.

Facility Background

CHS owns and operates a 42,000-barrel per day refinery south of Laurel, Montana. The refinery has been in operation since the 1930s. Fuel products include propane, gasoline, burner fuel, diesel fuel, asphalt, propane de-asphalted pitch, and road oil.

The original owner and operator of the Laurel Refinery was Independent Refining Company. In the 1940s, Farmers Union Central Exchange, Inc. (CENEX, INC.) purchased the refinery. In 1998, CENEX merged with Harvest States Grain to form Cenex Harvest States Cooperatives, the current owner of the refinery.

Land Treatment Unit (LTU)

An area in the southwestern portion of the refinery was used from 1965 to 1988 to treat refinery wastes. The LTU is divided into a southern portion, the Old Landfarm (OLF), and a northern portion, the New Landfarm (NLF). The OLF is approximately 14.5 acres and was used from 1964 through 1981. The NLF is approximately 8 acres and was used from 1981 through 1988.

Land treatment is a standard method in the petroleum industry for treatment of refinery wastes. During land treatment, refinery wastes are applied and tilled into the upper 12 inches of soil. Microbes and sunlight then degrade, transform, or immobilize the petroleum constituents in the wastes. Maintenance of proper soil pH, soil nutrients, management of waste application rate, and control of surface water run-off are all keys to maximizing the effect of land treatment.

CHS (then CENEX, Inc.) began closure of both portions of the LTU in 1991, following the closure requirements as outlined in the closure/post-closure permit. The permit established standards for allowable concentrations of hydrocarbon and metal constituents in the LTU soils. Soils with constituents above the standard were excavated in phases and placed on areas of the LTU where soil standards had been met. Each excavated soil volume (or 'lift) was then land treated until standards were met for that lift. Soil standards for the final lift were met in 2000.

CHS has requested a CAMU designation for the southern portion of the LTU (the Old Landfarm area). The CAMU would be used to land treat and dispose of hydrocarbon-contaminated soil

generated during corrective action activities. Types of contaminated soil expected to be treated include soils from the closure of the New Landfarm; soils from corrective measures requiring facility-wide corrective action, and soils from remediation of spills and/or excavation from facility construction or maintenance activities.

Facility-Wide Corrective Action

EPA conducted a RCRA facility assessment (RFA) at the Laurel refinery in 1989. The RFA identified 32 areas needing further investigation for potential contamination in soils and groundwater. At the time of this draft permit issuance, CHS has completed part of the RCRA Facility Investigation (RFI), focusing primarily on soil contamination. Further RFI work will include additional investigation of both soil and groundwater contamination, and a human and an ecological risk assessment. Once the RFI and risk assessments are complete, CHS will conduct a Corrective Measures Study (CMS).

In addition to the RFI work, CHS has implemented several Interim Measures (IM) at the refinery boundary to halt off-site migration of contaminants in groundwater. The IM technologies include air sparging fences, pump and treat well systems, and a slurry wall barrier. CHS has also implemented an Interim Stabilization Measure (ISM), which consists of a pump and treat system in the center of the refinery for petroleum product floating on the groundwater table. The IM and ISM technology have proven very successful and will likely be incorporated into the final corrective measures chosen for the site.

Please see the Fact Sheet for a more detailed description of the permit reissuance.

Need for Proposal

The need for this permit is threefold:

1. The 10-year term for the current permits issued by DEQ and EPA ended in 2001. The permits have been extended until issuance of a new permit. Hazardous waste management activities at the Laurel Refinery (operation of the CAMU and closure and post-closure of the CAMU and New Landfarm) require the facility to have a hazardous waste permit. Therefore, the permit must be reissued.

2. The Montana Hazardous Waste Act mandates that owners and operators of facilities with hazardous waste permits must conduct facility-wide corrective action. The permit contains the requirements for continued corrective action at the Laurel Refinery.

3. A permit combining the requirements for both management of hazardous waste management units and facility-wide corrective action is required because Montana is now authorized to implement the requirements of facility-wide corrective action.

Objectives of Proposal

The objectives of this permit re-issuance include:

- Merging facility-wide corrective action and hazardous waste management unit requirements into one permit;

- Providing environmental protection through permit requirements to operate and close the CAMU and New Landfarm, and continue facility-wide corrective action; and

- Updating permit requirements and permit format.

Alternatives Considered

1. *Proposed Action*

Under this alternative DEQ would issue MHWP-02-02 to CHS, after considering all comments received during the public comment period. **Please see the attached Fact Sheet for information on the public comment period.**

The proposed action would include:

- Designation of a CAMU to treat remediation waste in an on-site land treatment unit.

- Continued closure and post-closure care of both portions of the land treatment unit. Requirements include soil, soil-pore liquid, and groundwater monitoring to ensure contamination does not pose a risk to human health and the environment.

- Incorporation of facility-wide corrective action requirements.

2. *Reissue a hazardous waste permit and deny the CAMU request*

Under this alternative, DEQ would deny the CHS request to designate a portion of the land treatment unit as a CAMU. By denying this request, CHS could not treat or dispose any remediation wastes on-site and alternative disposal/treatment methods would be necessary. A permit for facility-wide corrective action and post-closure care of the LTU would still be required. This alternative was not considered because DEQ believes the operating, closure, and post-closure requirements for the CAMU, as set forth in the draft permit, are reasonable and safe standards. Therefore, DEQ believes it would not be reasonable to deny the CHS request for a designated CAMU at the Laurel Refinery.

3. *Transport wastes off-site*

This alternative consists of transporting remediation wastes generated at the Laurel Refinery to a commercial treatment facility in place of treating the wastes in a CAMU. This alternative was reviewed by DEQ, but was not considered to be either as reasonable or prudent as the proposed action. The proposed action of land treating wastes would be more economically feasible for CHS than shipping wastes to commercial facilities for treatment. DEQ anticipates remediation waste will be treated in an environmentally sound manner given the amount of wastes projected for treatment, the proven viability of land treating hydrocarbon-effected wastes, and conditions within the permit requiring stringent operating, closure and post-closure management standards.

4. *Alternative treatment or disposal*

This alternative includes any other alternative options for the treatment and/or disposal of remediation waste generated at the Laurel Refinery. This alternative was not considered since land treatment has proven to be a viable treatment for hydrocarbon-contaminated wastes.

5. *No Action*

Under this alternative DEQ would deny the CHS permit application and not issue MTHWP-02-02. By denying the permit application, CHS could not treat remediation waste in an on-site

corrective action management unit, or conduct closure and post-closure care or facility-wide corrective action. This alternative was not considered because the MHWA mandates that a permit is required for these activities. In addition, CHS has shown compliance with conditions of the original hazardous waste and the facility-wide corrective action permits throughout their 10-year duration. Therefore, DEQ believes it would not be a reasonable alternative to deny permit re-issuance.

Stipulations and Controls

CHS must meet all requirements of the draft permit and any applicable requirements of the MHWA. The permit requires testing of soils and monitoring of soil-pore liquid and groundwater at the CAMU and New Landfarm at specified times throughout the year. The permit also requires remediation of releases or potential releases of hazardous waste or constituents facility-wide. The Permittee must submit a written report after each sampling event, comprehensive annual reports, and facility-wide corrective action work plans and reports.

The State of Montana has adopted regulations for CAMU requirements into State law; however, EPA has not yet authorized the State of Montana for implementation of these requirements. EPA has determined it appropriate for States to use their authorities in a manner consistent with the 1993 CAMU Rule to allow comparable remediation activities prior to receiving authorization for the rule. In a letter to Jan Sensibaugh, Director of DEQ, from John Wardell, Director of the EPA Montana Office, EPA stated that the State of Montana may approve CAMUs that comply with the federal CAMU rule. Therefore, the State of Montana will conduct oversight of CAMU requirements in the CHS hazardous waste permit.

Analysis of Regulatory Impacts on Private Property Rights

A *Private Property Assessment Act Checklist* was completed for the draft permit and is on file at the DEQ. The DEQ determined that no taking or damaging implications requiring a further impact assessment exist.

Summary of Impacts

This summary was completed for Alternative 1 only. Alternatives 2, 3, 4, and 5 were not

considered to be reasonable alternatives. Tables 1 and 2 rate the potential human environment impacts from reissuing MTHWP-02-02 according to Alternative 1. The human environment includes those attributes, such as biological, physical, social, economic, cultural, and aesthetic factors, that interrelate to form the environment. Impacts may be adverse, beneficial, or both. The following criteria are used to rate the impacts:

- The severity, duration, geographic extent, and frequency of occurrence;
- The probability the impact will occur if the proposed action occurs;
- Growth-inducing or growth-inhibiting aspects of the impact;
- The quantity and quality of each environmental resource or value affected;
- The importance to the State and society of each environmental resource or value affected;
- Any precedent set as a result of an impact from the proposed action that would commit DEQ to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

The following are definitions for major, moderate, minor, none, and unknown impacts on the human environment:

- Major: A significant change from the present condition of the human environment. Major impacts are serious enough to warrant preparing an environmental impact statement (EIS).
- Moderate: Not a major or minor change from the present condition of the human environment. A single moderate impact may not warrant preparing an EIS, however, when considered with other impacts, an EIS may be required.
- Minor: A slight change from the present condition of the human environment. Minor impacts are not serious enough to warrant preparing an EIS.
- None: No change from the present condition of the human environment.
- Unknown: An EIS must be conducted to determine the effects on the human environment if impacts are unknown.

TABLE 1: POTENTIAL IMPACTS ON PHYSICAL AND BIOLOGICAL ENVIRONMENT.

Resource	Major	Moderate	Minor	None	Unknown	Discussion Attached
A. Air Quality			√			√
B. Water Quality, Quantity, and Distribution			√			√
C. Geology and Soil Quality, Stability, and Moisture			√			√
D. Historical and Archaeological Sites				√		
E. Aesthetics				√		
F. Terrestrial and Aquatic Life and Habitats				√		
G. Vegetation Cover, Quantity, and Quality				√		
H. Unique, Endangered, Fragile, or Limited Environmental Resources				√		
I. Demands on Environmental Resources of Water, Air, and Energy				√		
J. Cumulative and Secondary Impacts				√		

Key: √ =Alternative 1

TABLE 2: POTENTIAL IMPACTS ON SOCIAL, ECONOMIC, & CULTURAL ENVIRONMENT

Issue	Major	Moderate	Minor	None	Unknown	Discussion Attached
A. Social Structures and Mores				√		
B. Cultural Uniqueness and Diversity				√		
C. Local and State Tax Base and Tax Revenue				√		
D. Agricultural or Industrial Production				√		
E. Human Health				√		
F. Access to and Quality of Recreational and Wilderness Activities				√		
G. Quantity and Distribution of Employment				√		
H. Distribution of Population				√		
I. Demands for Governmental Services			√			√
J. Industrial and Commercial Activity			√			√
K. Locally Adopted Environmental Plans and Goals				√		
L. Cumulative and Secondary Impacts				√		

Key: **√=Alternative 1**

Discussion of Table 1
Potential Impacts on Physical and Biological Environment from Alternative 1

1. **Resource A - Air Quality:** Impacts to air quality are anticipated to be minor. Excavation of remediation wastes during corrective action and land treatment activities such as placement and tilling may cause dust emissions. Permit conditions require that CHS monitor air quality and take corrective measures as needed.

2. **Resource B - Water Quality, Quantity, and Distribution:** Groundwater has been impacted by previous practices at the land treatment unit. Placement of hydrocarbon-affected remediation waste may cause further degradation through migration of hazardous constituents through the soil to groundwater. Permit conditions require strict operation of the CAMU to minimize potential for migration. Surface operation requirements include sampling of remediation waste, limits for constituent concentration of waste to be placed on the CAMU, and management practices such as tilling and nutrient addition to enhance biodegradation of the waste. Subsurface requirements include subsurface soil sampling, groundwater sampling, and the maintenance of a barrier wall/groundwater recovery system at the downgradient edge of the CAMU. Should soil and/or groundwater monitoring indicate migration of constituents, CHS must implement corrective measures to remediate the contamination and prevent further migration.

Discussion of Table 2
Potential Impacts on Social, Economic, & Cultural Environment from Alternative 1

1. **Issue C - Local and State Tax Base and Tax Revenue:** Impacts on local and state tax base and tax revenues are anticipated to be minor. Fees for modifications to the permit will be generated by DEQ.

2. **Issue I - Demands for Governmental Services:** Impacts on demands for governmental services will not change from those of the current permits. DEQ personnel will review documentation from operations of the CAMU, closure and post-closure of the New Landfarm,

and facility-wide corrective action. DEQ personnel will also conduct inspections of the facility on at least an annual basis.

3. Issue J - Industrial and Commercial Activity: Impacts on industrial and commercial activity will not change from those generated by the current permits. CHS will hire environmental consulting firms to complete sampling, remediation, and facility-wide corrective action investigations. Samples for analytical evaluation will be sent to an external analytical laboratory for analysis.

RECOMMENDATIONS

Recommended Alternative

Alternative 1 (the proposed action) is the recommended alternative. Under this alternative, DEQ would request public comment on the draft hazardous waste permit reissuance. Determination by DEQ to reissue or deny a final permit will take into account all comments received during the public comment period.

Explanation of Recommended Course of Action

Alternative 1 is the recommended course of action. CHS has submitted a complete permit application that meets the requirements of ARM 17.53.1200 et seq. and is protective of human health and the environment. CHS has also shown compliance with the conditions of the State-issued hazardous waste permit and the federal corrective action permit throughout their 10-year duration. Therefore, it would not be a reasonable alternative to deny the permit reissuance.

Individuals or Groups Contribution to this EA

Environmental Protection Agency

Other Groups or Agencies Contacted or Having Overlapping Jurisdiction

The Environmental Protection Agency (EPA)

EA Prepared by

Rebecca Holmes

Date: March 25, 2002

Montana Department of
ENVIRONMENTAL QUALITY

FACT SHEET

FOR REISSUANCE OF
A MONTANA HAZARDOUS WASTE PERMIT
(MTHWP-02-02)

CENEX HARVEST STATES COOPERATIVES
LAUREL REFINERY
LAUREL, MONTANA
EPA ID NO. MTD 006238083

Permitting and Compliance Division
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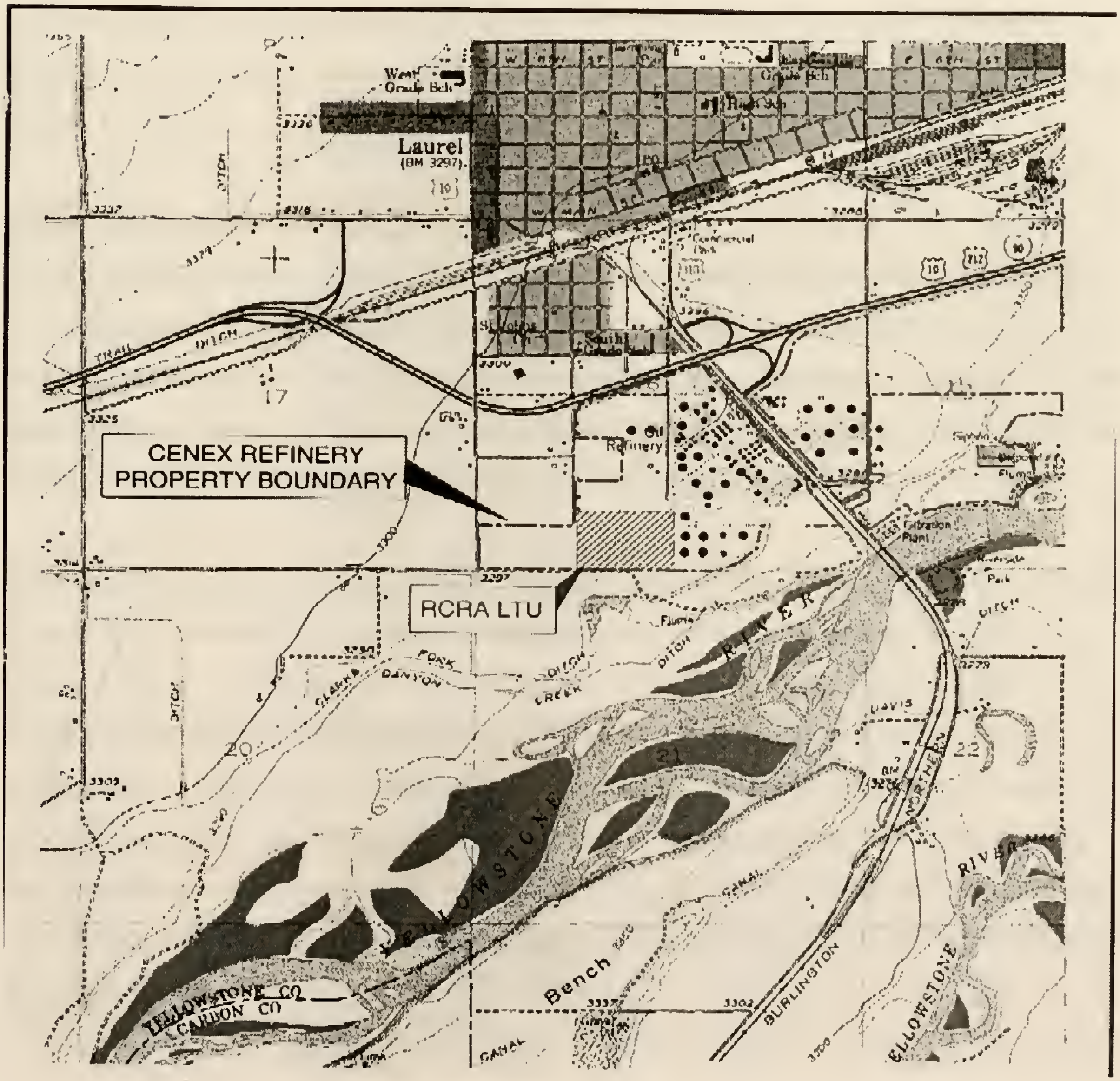
INTRODUCTION

The Montana Department of Environmental Quality (DEQ) intends to re-issue a hazardous waste permit to Cenex Harvest States Cooperatives (CHS) for the operation of a corrective action management unit (CAMU), closure and post-closure care of a land treatment unit, and facility-wide corrective action at the CHS Laurel Refinery. A draft permit (MTHWP-02-02) has been written under the authority of the Montana Hazardous Waste Act (MHWA), Montana Code Annotated, Title 75, Chapter 10, Part 4 and according to the Administrative Rules of Montana (ARM) Title 17, Chapter 53.

Figure 1: Location Map of the CHS Laurel Refinery



MTHWP-02-02 is a reissuance and combination of two permits: a hazardous waste permit (MTHWP-91-01) issued by DEQ for closure and post-closure care of two land treatment units, and an EPA-issued permit requiring facility-wide corrective action. The two original permits for the Laurel Refinery were issued in 1991.

DEQ is seeking comments from the public and other interested parties on the draft permit. This Fact Sheet provides information on the draft permit and the public comment process.

Please note: The public comment period on the draft permit ends on May 8, 2002.

This fact sheet was prepared in accordance with the requirements of 40 Code of Federal Regulations (CFR) 124.8, as incorporated by reference in the Administrative Rules of Montana (ARM) 17.53.1201.

REGULATORY BACKGROUND

The Resource Conservation and Recovery Act (RCRA) is the federal law which requires proper management and disposal of hazardous waste. Hazardous waste permits are required for on-site units that are used to treat, store or dispose of hazardous waste. Hazardous waste permits must also include provisions requiring facility-wide investigation and remediation of hazardous waste releases. The Montana Hazardous Waste Act (MHWA) is the State equivalent of RCRA.

The State of Montana issued a hazardous waste permit to CHS in 1991 for the closure and post-closure care of the facility's inactive land treatment unit. In addition, because the State of Montana was not yet authorized by EPA to implement facility-wide corrective action, EPA issued a federal permit to CHS that same year. The EPA permit required facility-wide investigation of releases and potential releases of hazardous waste or hazardous constituents to soil or groundwater. On December 26, 2000, the State was approved by EPA to implement facility-wide corrective action. This enables MDEQ to combine requirements for closure and post-closure care of the land treatment unit with requirements for facility-wide corrective action in a single permit.

Hazardous waste permits are issued for a period of 10 years. At the end of this period, the permittee may apply for renewal. CHS submitted an application for permit reissuance in August 2000.

CHS's application is complete, meets the requirements of ARM 17.53.1200 et seq., and is protective of human health and the environment. A draft permit has been prepared based on the complete application and is issued under Title 75, Chapter 10, Part 4, of MHWA.

FACILITY BACKGROUND

CHS owns and operates a 42,000 barrel per day refinery in Laurel. The refinery has been in operation since the 1930s. Fuel products include propane, gasoline, burner fuel, diesel fuel, asphalt, propane de-asphalted pitch, and road oil.

The original owner and operator of the Laurel Refinery was Independent Refining Company. Farmers Union Central Exchange, Inc. (CENEX, INC.) purchased the refinery in the 1940's. In 1998, CENEX merged with Harvest States Grain to form Cenex Harvest States Cooperatives, the current owner of the refinery.

Current Status of the Land Treatment Unit (LTU)

An area in the southwestern portion of the refinery (RCRA LTU in Figure 1) was used from 1965 to 1988 to treat refinery wastes. The LTU is divided into a southern portion, the Old Landfarm (OLF), and a northern portion, the New Landfarm (NLF). The OLF is approximately 14.5 acres and was used from 1964 through 1981. The NLF is approximately 8 acres and was used from 1981 through 1988.

Land treatment is a standard method in the petroleum industry for treatment of refinery wastes. During land treatment, refinery wastes are applied and tilled into the upper 12 inches of soil. Microbes and sunlight then degrade, transform, or immobilize the petroleum constituents in the wastes. Maintenance of proper soil pH, soil nutrients, management of waste application rate, and control of surface water run-off are all keys to maximizing the effect of land treatment.

Wastes historically managed at the LTU include the following:

Hazardous Wastes		**Non-Hazardous Wastes**
Common Name	**Hazardous Waste Code**	River silt, cooling tower sludge, tank bottoms, biological treatment pond sludge, oily soils, asbestos-containing material, and process vessel residuals
Dissolved air flotation (DAF) float	K048	
API separator sludge	K051	
Leaded tank bottoms	K052	

CHS (then CENEX, Inc.) began closure of both portions of the LTU in 1991, following the closure requirements as outlined in the closure/post-closure permit. The permit established standards for allowable concentrations of hydrocarbon and metal constituents in the LTU soils. Soils with constituents above the standard were excavated in phases and placed on areas of the LTU where soil standards had been met. Each excavated soil volume (or 'lift) was then land treated until standards were met for that lift. Soil standards for the final lift were met in 2000.

Current Status of Facility-Wide Corrective Action

Please refer to Appendix A for an explanation of the phases of the facility-wide corrective action process.

EPA conducted a RCRA facility assessment (RFA) at the Laurel refinery in 1989. The RFA identified 32 areas needing further investigation for potential contamination in soils and groundwater. At the time of this draft permit issuance, CHS has completed part of the RCRA Facility Investigation (RFI), focusing primarily on soil contamination. Further RFI work will include additional investigation of both soil and groundwater contamination, and a human and an ecological risk assessment. Once the RFI and risk assessments are complete, CHS will conduct a Corrective Measures Study (CMS).

In addition to the RFI work, CHS has implemented several Interim Measures (IM) at the refinery boundary to halt off-site migration of contaminants in groundwater. The IM technologies include air sparging fences, pump and treat well systems, and a slurry wall barrier. CHS has also

implemented an Interim Stabilization Measure (ISM), which consists of a pump and treat system in the center of the refinery for petroleum product floating on the groundwater table. The IM and ISM technology have proven very successful and will likely be incorporated into the final corrective measures chosen for the site.

CONTENTS OF THE DRAFT PERMIT

All conditions of the draft permit are based on requirements in Title 17, Chapter 53 of ARM for the management of hazardous waste. The draft permit is divided into seven modules:

Module I	Standard Conditions
Module II	General Facility Conditions
Module III	Facility-wide Corrective Action Requirements
Module IV	Corrective Action Management Unit (CAMU) Operations
Module V	Groundwater Monitoring
Module VI	Closure/Post-Closure
Module VII	Waste Minimization

Modules I and II

Modules I and II contain general requirements for modifications, reporting, recordkeeping, sampling and analysis.

Module III

Module III establishes requirements for each phase of facility-wide corrective action. Appendix A explains facility-wide corrective action requirements.

Modules IV through VI

Modules IV through VI are specific to the LTU. They cover operation of the CAMU, and groundwater monitoring, closure and post-closure care for both portions of the LTU. The following explains the requirements for operation of the CAMU, as well as closure and post-closure requirements.

Operation of the CAMU

CAMUs are physically distinct geographic areas within a facility designated for managing, treating or disposing remediation wastes generated by corrective action or cleanup at a facility. CAMU rules are found in 40 CFR 264.552 and are incorporated by reference in ARM 17.53.801.

CHS has requested a CAMU designation for the southern portion of the LTU (the Old Landfarm area). The CAMU would be used to land treat and dispose of petroleum-contaminated soil generated during corrective action activities. Types of contaminated soil expected to be treated include soils from the closure of the New Landfarm, soils from corrective measures required by facility-wide corrective action, and soils from remediation of spills and/or excavation from facility construction or maintenance activities.

The draft permit places conditions on how CHS must operate and maintain the CAMU. Concentrations of metals and hydrocarbons in both the contaminated soil and within the CAMU soils must not exceed permit-designated limits. Soil nutrients (specifically carbon, nitrogen, potassium, and phosphorous) and pH must also be kept within certain limits. The CAMU must be tilled to enhance biodegradation of the hydrocarbons and to control weeds and odor. Blowing soils and/or wastes must be controlled and minimized.

CAMU Monitoring Requirements

The draft permit contains requirements that guard against migration of contamination into deeper soils or groundwater. Soil and groundwater monitoring requirements also ensure the CAMU is operated at maximum efficiency. Soil sampling is required annually and groundwater must be sampled semi-annually.

The zone of incorporation (the top 12 inches of soil) must be sampled for nutrient level, organic compounds, oil and grease, and metals. Sampling for nutrient level helps determine fertilizer needs; organic compound analysis indicates how well the waste is degrading.

A zone from 36 to 66 inches below the ground surface must also be sampled to ensure there is no

significant downward migration of contaminants. If contamination is found in soils below 5 feet (60 inches) or is detected in groundwater, the draft permit requires CHS to take action to correct the problem and revise operations.

The draft permit also requires that CHS install lysimeters in the CAMU. Lysimeters are an in-soil technology used to collect samples of soil-pore liquid from the subsurface. Analysis of soil-pore liquid is another tool used to determine whether contaminants have migrated into the subsurface.

Oversight of the CAMU

The State of Montana has adopted regulations for CAMU requirements into State law; however, EPA has not yet authorized the State of Montana for implementation of these requirements. EPA has determined it appropriate for States to use their authorities in a manner consistent with the 1993 CAMU Rule to allow comparable remediation activities prior to receiving authorization for the rule. In a letter to Jan Sensibaugh, Director of DEQ, from John Wardell, Director of the EPA Montana Office, EPA stated the State of Montana may approve CAMUs that comply with the federal CAMU rule. Therefore, the State of Montana will conduct oversight of CAMU requirements in the CHS hazardous waste permit.

Groundwater Corrective Action

Groundwater beneath the NLF and CAMU area has been contaminated with hydrocarbons, both as a LNAPL phase and as a dissolved-phase. The original hazardous waste permit required CHS to remediate the contaminated groundwater. CHS excavated contaminated soils from the two landfarms (thereby reducing the source of contamination) and installed a barrier wall system. The barrier wall system is composed of a bentonite slurry wall two feet wide and 15 feet deep at the downgradient edge of the CAMU. Groundwater wells are located just upgradient of the wall and serve as both monitoring wells and LNAPL recovery wells. The barrier wall cuts off migration of contaminants and allows ponding of LNAPL along the upgradient edge of the wall. The LNAPL is recovered in the monitoring/recovery wells and recycled back into the refinery process. Groundwater monitoring wells located south (down gradient) of the barrier wall indicate the system is containing the LNAPL. Monitoring also indicates the dissolved-phase

contaminants are being naturally degraded to below laboratory detection limits.

Closure

The draft permit outlines requirements for closure of the NLF and CAMU. CHS is proposing to address closure separately for each unit.

Closure of the New Landfarm (NLF): CHS proposes closure of the NLF in one of two ways:

- The first option would entail establishing a vegetative cover over the NLF and continuing post-closure care for a period of 30 years.
- The second option would entail excavating soil and waste residuals having hydrocarbon concentrations above a level which would pose a health threat to humans or the environment. This level would be established through a baseline human health and ecological risk assessment. Excavated material would be placed on the CAMU for treatment. Once the removal of material from the NLF is complete, the NLF would be removed from permitting requirements. No post-closure care would be required with the second option.

Closure of the CAMU: Once the CAMU has reached it's treatment capacity and the contaminated soils have been treated to permit-required treatment standards, the CAMU will be closed. A vegetative cover will be established and post-closure care will be maintained throughout the post-closure care period.

Post-Closure Care

Regulated units such as the CHS LTU that are closed with waste or contaminated soils above acceptable human health and environmental risk levels must undergo post-closure care. Post-closure care includes continued soil and groundwater monitoring, inspection and general maintenance. Post-closure generally continues for a period of 30 years. However, DEQ may extend or shorten that period should conditions warrant.

PURPOSE OF THE PUBLIC COMMENT PERIOD

The public comment period allows interested citizens, members of the regulated community, and

other governmental agencies an opportunity to evaluate the ability of CHS to comply with the draft permit. The public is given forty-five (45) days to review and comment on the draft permit before DEQ takes any final action.

Comments and Comment Period

The comment period for the CHS draft permit will begin on **March 25** and will end on **May 8, 2002**. Written comments must be submitted to DEQ within the 45-day comment period. Comments should include all reasonably available references, factual grounds for comments, and supporting material.

Public Hearing

A public hearing will be held if DEQ determines, based upon requests, there is a significant degree of public interest in the draft permit (40 CFR 124.12 as incorporated by reference in ARM 17.53.1200). Written requests for a public hearing may be sent to Rebecca Holmes at the address listed below.

Location of the Draft Permit

The draft permit, Environmental Assessment and Fact Sheet will be available for review at the following locations:

Department of Environmental Quality Air & Waste Management Bureau Metcalf Building 1520 E. 6th Ave. Helena, Montana (406) 444-3490 Monday through Friday 8:00 am -5:00 pm	Laurel Public Library 720 West 3rd Street, Laurel, Montana, (406) 628-4961 Monday through Thursday 10:00 am - 7:30 pm Saturday 10:00 - Noon

Written Comments

Please submit written comments to:

Rebecca Holmes
DEQ, Permitting and Compliance Division
Air & Waste Management Bureau
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-2876

PROCEDURES FOR REACHING A FINAL DECISION ON PERMIT ISSUANCE

When DEQ makes a final decision to issue, deny, or change the draft permit, notice will be given to the applicant and each person who submitted written comments or requested a notice of the final decision. The final permit decision shall become effective thirty (30) days after the service of notice of the decision, unless a later date is specified or a public hearing is requested under 40 CFR 124.11 as incorporated by reference in ARM 17.53.1200. If no comments are received requesting a change in this draft permit, the final permit shall become effective immediately upon issuance.

FOR MORE INFORMATION

If you need further information, please contact Rebecca Holmes at the address and phone number listed above.

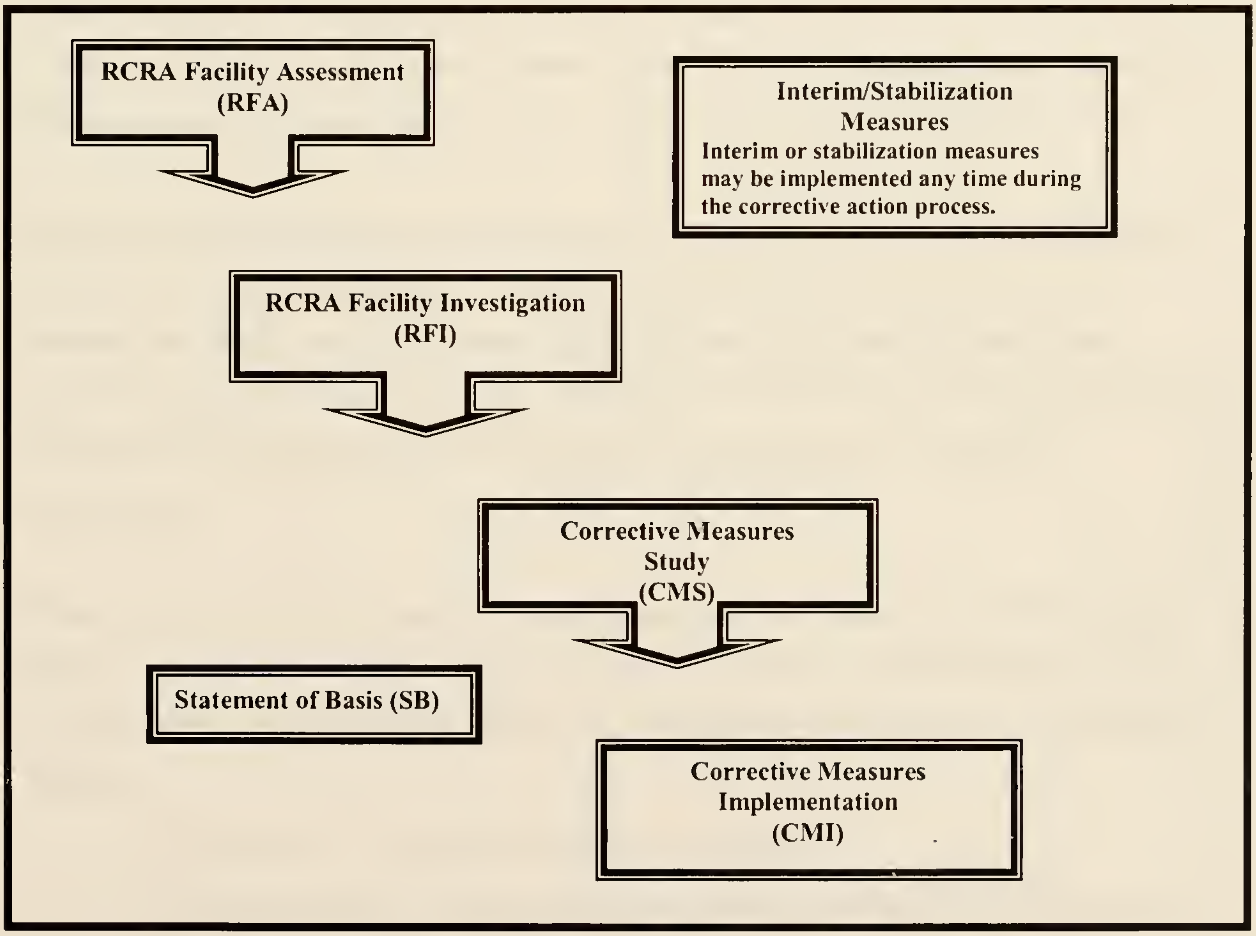
Dated March 25, 2001

Appendix A

The HSWA Corrective Action Process

The corrective action process is generally made up of six major phases. These phases are not always undertaken in a step-by-step progression towards final facility cleanup. Many times a phase may be implemented as an interim measure, while others may be postponed until a later date. For instance, a corrective measure may be implemented at one SWMU to stop off-site migration of a contaminant before a site-wide investigation of potential releases to soil and groundwater is competed. The draft permit outlines requirements for each phase in Module III.

The figure below shows the general progression of the corrective action process, from the first phase of determining areas of concern to the final phase of corrective measures completion.



RCRA Facility Assessment (RFA)
Interim/Stabilization Measures
Interim or stabilization measures may be implemented any time during the corrective action process.
RCRA Facility Investigation (RFI)
Corrective Measures Study (CMS)
Statement of Basis (SB)
Corrective Measures Implementation (CMI)

➢ RCRA Facility Assessment (RFA): Often the first phase in the corrective action process is the RFA. The RFA identifies potential and actual releases from SWMUs/AOCs and makes preliminary determinations about releases, and the need for corrective action and/or interim measures.

➢ Interim/Stabilization Measures (IM or ISM): Interim/stabilization measures are short-term actions taken to correct immediate threats to human health or prevent damage or contaminant migration to the environment. Interim or stabilization measures may be taken at any time in the corrective action process.

➢ RCRA Facility Investigation (RFI): The RFI takes place when a release has been identified and further investigation is necessary. The purpose of the RFI is to gather enough data to fully characterize the nature, extent, and rate of migration of contaminants. This information is used to determine the appropriate response action. The regulatory agency then reviews the RFI and determines whether further corrective action and cleanup is necessary.

➢ Corrective Measures Study (CMS): If the regulatory agency determines further cleanup is necessary, the facility then develops a CMS. The CMS identifies and evaluates cleanup alternatives, called corrective measures. The facility usually recommends one of the alternatives as a part of the CMS report. The regulatory agency then reviews the CMS report and selects what it believes to be the best corrective measure, given site-specific considerations.

When selecting a corrective measure, the short- and long-term reliability and effectiveness; reduction of toxicity, mobility or volume of hazardous constituents; implementability; and costs are taken into consideration. In addition, proposed remedies must satisfy the following criteria:

- Be protective of human health and the environment;
- Control the sources of releases thereby reducing or eliminating, to the maximum extent practicable, further releases posing a threat to public health and the environment;

- Attain media clean-up standards; and
- Comply with applicable waste management standards.

The facility's permit must be modified to include the chosen corrective measure (or measures). The corrective measure(s) is subject to public review and comment through the permit modification process.

- ➢ Statement of Basis (SB): The regulatory agency writes the SB. Selection criteria, decision-making process and rationale utilized for selection of the corrective measure are described in the SB. The document also gives a description of the preferred corrective measure. The SB is similar to the Record of Decision (ROD) used in the federal Superfund program. The SB is made available for comment during the public comment period.

- ➢ Corrective Measures Implementation (CMI): Once a corrective measure has been selected, the facility enters the CMI phase of corrective action. During the CMI, the owner and operator of the facility implement the chosen corrective measure.

- ➢ Completion of Corrective Measures: When cleanup goals are reached, the facility must submit a certification of completion to the agency which has been signed by a registered professional engineer. The facility must also submit a CMI certification report documenting the cleanup has been accomplished.